HARVARD T.H. CHAN | SCHOOL OF PUBLIC HEALTH
Health Systems Innovation Lab

HSIL HACKATHON 2027 · 8TH EDITION

Building High-Value Health Systems: Leveraging AI

2027 Hackathon Guide for Participants

8th Annual Health Systems Innovation Hackathon · **Friday–Saturday, April 16–17, 2027** · In person at hubs worldwide

AT A GLANCE

2 days, in person
April 16–17 at your local hub

Teams of 3–5
Diverse, multidisciplinary teams encouraged

3 + 5 minutes
3-minute pitch, then 5 minutes of judges' Q&A

10 criteria
Common HSIL rubric, scored out of 20

2027 KEY DATES

Hackathon	→	Bootcamp 1	→	Bootcamp 2	→	Venture Building Immersion	→	Demo Day
Apr 16–17		Apr 19–30		May 3–14		May 24 – Jun 18		Sep 29

1 Welcome

Thank you for joining the **8th Health Systems Innovation Hackathon**. Every year, the Harvard Health Systems Innovation Lab (HSIL) organizes the Hackathon with partners around the world. Its mission is to empower innovators to develop solutions that improve health systems.

The Hackathon brings together students, young professionals and experts from diverse fields to tackle critical health-system challenges. Working across disciplines encourages unconventional thinking, and teams are supported to build practical solutions that challenge the status quo and bridge the gap between theory and practice. We hope the relationships and networks you build here will last well beyond the two days.

2 The 2027 Hackathon

This year's Hackathon takes place on **Friday 16 and Saturday 17 April 2027**. The theme is **"Building High-Value Health Systems: Leveraging Artificial Intelligence."**

How is the Hackathon organized?

The Hackathon is a **two-day, in-person event** delivered across collaborating hubs in North America, Latin America, Europe, Asia, Australia, the Middle East and Africa. You may arrive with an existing health-focused idea or form a team around a challenge during the event.

Teams work intensively to define a problem, develop or refine a solution, test its value proposition and implementation pathway, and prepare a final pitch. Mentors with healthcare and health-innovation experience advise teams, challenge their assumptions and give feedback on their pitch. At the end of the two days, each team presents to a local judging panel, and **judges at each hub select the winning teams**.

3 Event Program

Each hub sets a local agenda that reflects its venue, time zone, participants and local context. **Your hub organizers will share the final schedule before the event.**

Check-in & opening panel	→	Team formation & ideation	→	Hack: develop your innovation	→	Consult mentors & refine pitch	→	Final pitches & judging
Day 1		Day 1		Days 1–2		Days 1–2		Day 2

Session	What happens
Welcome and orientation	Event overview, expectations, team formation and key instructions
Ideation and solution development	Teams define or refine the problem and begin building their innovation
Mentoring	Focused feedback on health-system relevance, technology, implementation, business model and pitch
Pitch preparation	Teams refine their story, prototype or visual demonstration, and answers to likely judge questions
Final pitches and judging	Teams present their innovations to the judging panel on Day 2

4 Team Criteria

The Hackathon is designed mainly for **early-stage innovation**. Concept-stage ideas and early ventures are strongly encouraged, although teams with more mature innovations may also take part.

- Teams of **3–5 members** are recommended.
- **Diverse teams** are encouraged: health or clinical, engineering or AI, public health, design, business, policy, implementation and communications.
- Join **individually**, as part of an **existing team**, or as an **early-stage startup**.
- Solutions may be **non-profit or for-profit**.
- A fully working prototype is **not required**, but you must clearly show how the solution would work and why it could create value.

5 Team Formation & Communication

Accepted participants join a **communication channel managed by their local hub**. Depending on the hub, this may be Slack, WhatsApp, Telegram, WeChat, another messaging platform or another method chosen by the organizers.

The channel is used for local announcements, logistics, team formation, mentoring schedules and other Hackathon updates. If you are joining without a team, use the opportunities your hub provides to introduce yourself, share your skills and interests, and connect with potential teammates.

Your local hub organizers are your main point of contact for questions about the venue, schedule, communication platform and team formation.

6 Choosing a Challenge

There are **no predefined challenges or required tracks** in 2027. Teams are free to choose a health-system problem that matters in their local or global context, or to keep developing an existing health-focused idea.

Questions to ask before committing to an idea

- ? What problem are we solving, and for whom?
- ? Why is AI or another technology right for this problem?
- ? What evidence shows that the problem is important?
- ? What would need to be true for it to work in the target health system?
- ? What is being done today, and why is it not enough?
- ? Who would use, pay for, implement, regulate or be affected by it?

Illustrative areas

AI offers exciting possibilities in a field rich in data: analysing large medical datasets can improve diagnostic accuracy, predict disease risk, and raise both the quality and efficiency of care. The examples below are only meant to spark ideas; they are not exhaustive and do not limit what you can work on.

Illustrative area	Questions teams might explore
Clinical decision support and diagnosis	How might AI improve diagnosis, monitoring, triage or clinical decision-making without replacing appropriate human judgment?
Health information and interoperability	How might electronic health records, fragmented datasets or care transitions become more usable and connected?
Care coordination and navigation	How might AI reduce fragmented care pathways, improve referrals, or help patients navigate complex health systems?
Workforce and operational efficiency	How might technology reduce administrative burden, improve workflows, or extend scarce health-worker capacity?
Health literacy and communication	How might AI translate complex health information, overcome language barriers, or support better communication with patients?
Prevention and population health	How might AI support prevention, screening, risk identification, adherence or healthier behaviors?
Patient-facing AI tools	How might conversational tools, assistants or digital platforms safely support patients, caregivers and health workers?
Disease- or population-specific innovation	Cancer, cardiovascular disease, diabetes, mental health, infectious disease, pediatrics, maternal health, surgery or other health priorities

7 AI & Ethics

AI is an evolving field. It creates important opportunities in health, but it can also reproduce or amplify weaknesses in the data, systems and institutions where it is deployed. AI and machine-learning models are only as good as the data they are given.

Design responsibly
Attend to fairness, privacy, data quality, safety, transparency and appropriate human oversight across populations and settings.

Assign accountability
Who monitors performance, addresses failures and updates the system over time?

Ask if AI is needed
Could a simpler solution address the problem more safely and effectively?

More information: WHO, **Ethics and governance of artificial intelligence for health: Guidance on large multi-modal models**.

8 Mentoring

Mentors bring expertise in clinical care, health systems, technology and AI, public health, policy, design, entrepreneurship, commercialization, finance, implementation, communications and more. **Mentors strengthen your thinking; they don't take ownership of your idea or make decisions for your team.** Use your time with them to test assumptions, find blind spots, and improve the few things that most increase your chances of success.

Use mentors to help you

1
Sharpen the problem
Clarify the needs of users, beneficiaries, customers and other stakeholders.

2
Test the value proposition
Is it compelling and clearly different from what exists?

3
Map the alternatives
Understand the competitive or comparative landscape.

4
Strengthen the model
Implementation, business model, sustainability and go-to-market.

5
Set milestones
Realistic milestones, resource needs and a clear ask.

6
Rehearse the pitch
A concise pitch and answers to likely judge questions.

9 The Pitch

Organizers will share the final pitch and Q&A schedule. Each team gets:

3 minutes
to present your pitch

5 minutes
of questions from the judges

Whatever format you choose, make these eight elements easy for judges to follow:

Problem
The challenge, target user or population, and evidence of need

Solution
What it is, how it works, and why it's different

Opportunity
Target market or setting, and evidence of demand

Competition
Current alternatives and your positioning

Business model
Who pays, uses and benefits, and why it is sustainable

Go-to-market
A credible route to users, customers, partners or regulators

Team
Why you can execute, and what capability is still missing

Ask
The specific resources, partners, funding or access you need next

10 Preparing for Q&A

- Practise short answers on evidence, feasibility, competition, adoption, cost, regulation, data, ethics and risk.
- Answer the question asked before adding extra context.
- If evidence is limited, say what you know, what you don't yet know, and how you will test it.
- An honest acknowledgement of limitations is stronger than an unsupported claim.

Questions judges may ask

- What evidence shows this is an important, well-defined problem?
- Why is this meaningfully different from existing alternatives or workflows?
- Who is the primary user, customer, payer or beneficiary, and what is the evidence?
- Which assumption, if wrong, would most threaten the venture?
- What are the biggest implementation or adoption barriers?
- How will you reach users, customers, regulators or health-system decision-makers?
- What is the business or sustainability model, and who ultimately pays?
- What milestone would most de-risk the venture next?
- What exactly are you asking for now, and what will it enable?
- Why is this team well placed to execute, and what capability is missing?

11 Judging

All teams present to local judges on Day 2. Panels bring complementary clinical, technical, health-system, business and implementation perspectives. Every hub uses the **common HSIL judging rubric** below, so the same core criteria apply everywhere.

Judges assess what is demonstrated in the pitch and Q&A. **A polished presentation alone is not enough.**

Criterion	0 points	1 point	2 points
1. Problem definition & solution framing	Not well defined	Defined, but not well measured or framed	Defined, measured and framed effectively
2. Value proposition & innovation	Not novel or unclear	Some innovation, but unclear or weak value proposition	Clearly innovative, with a compelling and unique value proposition
3. Opportunity	No clear market or user segment	Market identified, but no attempt to validate	Clearly defined target market with evidence of need or attempt to validate
4. Competitive landscape	No awareness of competition	Acknowledges competition but limited differentiation	Clear understanding of competition, with strong positioning and differentiation
5. Business model	No viable model articulated	Described, but lacks detail or feasibility	Clear, viable and potentially scalable
6. Go-to-market (GTM) strategy	No clear plan to reach users, customers, regulators or beneficiaries	Plan outlined but lacks depth or specificity	Clear, actionable GTM strategy aligned with value proposition, business model and positioning
7. Ask	No ask outlined	Non-specific understanding of funding needs, milestones and terms	Compelling understanding of funding needs, milestones or value inflection points, and terms
8. Team	No relevant expertise or unclear roles	Partial alignment of skills and roles	Strong team with complementary skills and clear roles
9. Presentation	Disorganized or unclear	Mostly clear, with gaps in communicating key ideas	Clear, confident and compelling
10. Q&A	Unable to answer questions effectively	Some responses vague or inconsistent	Answers questions with compelling responses
Total	**Maximum score: 20 points**		

Scoring: 0 = criterion not demonstrated; 1 = partially demonstrated; 2 = clearly and convincingly demonstrated.

12 After the Hackathon: The HSIL Venture Building Program

Selected winning teams from participating hubs may advance into the **HSIL Venture Building Program**. This post-Hackathon program is **virtual** and helps teams refine their ventures through structured learning, expert feedback, mentoring and successive pitch-based selection.

Finalist teams will be invited to an **in-person Demo Day in Boston during Boston AI Week on September 29, 2027**, to present to investors, funders and ecosystem leaders.

For questions about your hub's venue, schedule or communication channel, please contact your **local hub organizers**. We wish you an inspiring Hackathon.